

In the Claims:

1-14. (Cancelled)

15. (Currently Amended) A method of growing a gallium nitride (GaN) epitaxial structure and fabricating an electronic device comprising:

- a) depositing a sacrificial epitaxial layer on a substrate, wherein the sacrificial epitaxial layer is essentially aluminum gallium nitride;
- b) depositing one or more structural epitaxial layers including a GaN buffer layer on the sacrificial epitaxial layer; and
- c) oxidizing the sacrificial epitaxial layer to separate the substrate from the one or more structural epitaxial layers, wherein oxidizing the sacrificial epitaxial layer alters the chemical composition of the sacrificial epitaxial layer such that an ability of the sacrificial layer to adhere the substrate to the one or more epitaxial layers is substantially reduced.

16. (Original) The method of claim 15 further comprising fabricating an electronic device using the structural epitaxial layers.

17. (Original) The method of claim 15 wherein the one or more structural epitaxial layers further comprises a nucleation layer, further wherein the depositing the one or more structural epitaxial layers step comprises depositing the nucleation layer on the sacrificial epitaxial layer.

18. (Original) The method of claim 17 wherein the oxidizing step further oxidizes the nucleation layer.

19. (Original) The method of claim 17 wherein the depositing the one or more structural epitaxial layers step further comprises depositing the GaN buffer layer on the nucleation layer.

20. (Original) The method of claim 19 wherein the one or more structural epitaxial layers further comprise a barrier layer and a cap layer, further wherein the depositing the one or more structural epitaxial layers step further comprises:

- a) depositing the barrier layer on the GaN buffer layer; and

b) depositing the cap layer on the barrier layer.

21. (Original) The method of claim 20 further comprising:

- forming an ohmic source contact on the cap layer;
- forming an ohmic drain contact on the cap layer; and
- forming a gate contact on the cap layer between the source contact and the drain contact,
wherein the source, gate, and drain contacts are separate contacts.

22. (Previously Presented) The method of claim 20 wherein the one or more structural epitaxial layers further comprises an insulation layer, further wherein the depositing the one or more structural epitaxial layers step further comprises depositing the insulation layer on the cap layer.

23. (Original) The method of claim 22 further comprising:

- forming a source contact on the cap layer;
- forming a drain contact on the cap layer; and
- forming a gate contact on the insulation layer between the source contact and the drain contact,
wherein the source, gate, and drain contacts are separate contacts.

24. (Original) The method of claim 15 wherein the oxidizing step oxidizes the sacrificial epitaxial layer with steam.

25. (Original) The method of claim 15 wherein the oxidizing step oxidizes the sacrificial epitaxial layer with hydrogen peroxide.

26. (Currently Amended) A method of fabricating an electronic device comprising:

- depositing a sacrificial epitaxial layer on a substrate, wherein the sacrificial epitaxial layer is essentially aluminum gallium nitride;

- b) depositing one or more structural epitaxial layers including a gallium nitride (GaN) buffer layer on the sacrificial epitaxial layer;
- c) fabricating an electronic device on the structural epitaxial layers; and
- d) oxidizing the sacrificial epitaxial layer to separate the substrate from the electronic device, wherein oxidizing the sacrificial epitaxial layer alters the chemical composition of the sacrificial epitaxial layer such that an ability of the sacrificial layer to adhere the substrate to the one or more epitaxial layers is substantially reduced.

27. (Original) The method of claim 26 wherein the one or more structural epitaxial layers further comprises a nucleation layer, further wherein the depositing the one or more structural epitaxial layers step comprises depositing the nucleation layer on the sacrificial epitaxial layer.

28. (Original) The method of claim 27 wherein the oxidizing step further oxidizes the nucleation layer.

29. (Original) The method of claim 27 wherein the depositing the one or more structural epitaxial layers step further comprises depositing the GaN buffer layer on the nucleation layer.

30. (Original) The method of claim 29 wherein the one or more structural epitaxial layers further comprises a barrier layer and a cap layer, further wherein the depositing the one or more structural epitaxial layers step further comprises:

- i) depositing the barrier layer on the GaN buffer layer; and
- ii) depositing the cap layer on the barrier layer.

31. (Original) The method of claim 30 wherein the fabricating step comprises:

- i) forming an ohmic source contact on the cap layer;
- ii) forming an ohmic drain contact on the cap layer; and
- iii) forming a gate contact on the cap layer between the source contact and the drain contact,

wherein the source, gate, and drain contacts are separate contacts.

32. (Previously Presented) The method of claim 30 wherein the one or more structural epitaxial layers further comprises an insulation layer, further wherein the depositing the one or more structural epitaxial layers step further comprises depositing the insulation layer on the cap layer.

33. (Original) The method of claim 32 wherein the fabricating step comprises:

- i) forming an ohmic source contact on the cap layer;
- ii) forming an ohmic drain contact on the cap layer; and
- iii) forming a gate contact on the insulation layer between the source contact and the drain contact,

wherein the source, gate, and drain contacts are separate contacts.

34. (Original) The method of claim 26 wherein the oxidizing step oxidizes the sacrificial epitaxial layer with steam.

35. (Original) The method of claim 26 wherein the oxidizing step oxidizes the sacrificial epitaxial layer with hydrogen peroxide.

36. (Currently Amended) The method of claim 15 A method of growing a gallium nitride (GaN) epitaxial structure and fabricating an electronic device comprising:

- a) depositing a sacrificial epitaxial layer on a substrate, wherein the sacrificial epitaxial layer has a high aluminum mole fraction;
- b) depositing one or more structural epitaxial layers including a GaN buffer layer on the sacrificial epitaxial layer; and
- c) oxidizing the sacrificial epitaxial layer to separate the substrate from the one or more structural epitaxial layers, wherein oxidizing the sacrificial epitaxial layer alters the chemical composition of the sacrificial epitaxial layer such that an ability of the sacrificial layer to adhere the substrate to the one or more epitaxial layers is substantially reduced.

37. (Previously Presented) The method of claim 36 wherein the aluminum mole fraction is greater than or equal to 0.3.

38. (Cancelled)

39. (Currently Amended) The method of claim 26 A method of fabricating an electronic device comprising:

- a) depositing a sacrificial epitaxial layer on a substrate, wherein the sacrificial epitaxial layer has a high aluminum mole fraction;
- b) depositing one or more structural epitaxial layers including a gallium nitride (GaN) buffer layer on the sacrificial epitaxial layer;
- c) fabricating an electronic device on the structural epitaxial layers; and
- d) oxidizing the sacrificial epitaxial layer to separate the substrate from the electronic device, wherein oxidizing the sacrificial epitaxial layer alters the chemical composition of the sacrificial epitaxial layer such that an ability of the sacrificial layer to adhere the substrate to the one or more epitaxial layers is substantially reduced.

40. (Previously Presented) The method of claim 39 wherein the aluminum mole fraction is greater than or equal to 0.3.

41. (Cancelled)